

**214A.2 Tests and standards.**

1. The department shall adopt rules pursuant to [chapter 17A](#) for carrying out [this chapter](#). The rules may include but are not limited to specifications relating to motor fuel, including but not limited to renewable fuel such as ethanol blended gasoline, biobutanol blended gasoline, biodiesel, biodiesel blended fuel, and motor fuel components such as an oxygenate. In the interest of uniformity, the department shall adopt by reference other specifications relating to tests and standards for motor fuel, including renewable fuel and motor fuel components, established by the United States environmental protection agency and A.S.T.M. international.

2. Octane number shall conform to the average of values obtained from the A.S.T.M. international D2699 research method and the A.S.T.M. international D2700 motor method.

a. Octane number for regular grade unleaded gasoline shall follow the specifications of A.S.T.M. international but shall not be less than eighty-seven.

b. Octane number for premium grade unleaded gasoline shall follow the specifications of A.S.T.M. international but shall not be less than ninety.

3. a. For motor fuel advertised for sale or sold as gasoline by a dealer, the motor fuel must meet requirements for that type of motor fuel and its additives established by the United States environmental protection agency including as provided under 42 U.S.C. §7545.

b. If the motor fuel is advertised for sale or sold as ethanol blended gasoline, the motor fuel must comply with departmental standards which shall meet all of the following requirements:

(1) Ethanol must be an agriculturally derived ethyl alcohol that meets A.S.T.M. international specification D4806 for denatured fuel ethanol for blending with gasoline for use as automotive spark-ignition engine fuel, or a successor A.S.T.M. international specification, as established by rules adopted by the department.

(2) Gasoline blended with ethanol must meet requirements established by rules adopted in part or in whole based on A.S.T.M. international specification D4814.

(3) For ethanol blended gasoline, at least nine percent by volume must be fuel grade ethanol. In addition, the following applies:

(a) For the period beginning on September 16 and ending on May 31 of each year, the state grants a waiver of one pound per square inch from the A.S.T.M. international D4814 Reid vapor pressure requirement.

(b) For the period beginning on June 1 and ending on September 15 of each year the United States environmental protection agency must grant a one pound per square inch waiver for ethanol blended conventional gasoline with at least nine but not more than ten percent by volume of ethanol pursuant to [40 C.F.R. §80.27](#).

(4) For standard ethanol blended gasoline, it must be ethanol blended gasoline classified as any of the following:

(a) From E-9 to E-15, if the ethanol blended gasoline meets the standards for that classification as otherwise provided in this paragraph “b”.

(b) Higher than E-15, if authorized by the department pursuant to approval for the use of that classification of ethanol blended gasoline in this state by the United States environmental protection agency, by granting a waiver or the adoption of regulations.

(5) E-85 gasoline must be an agriculturally derived ethyl alcohol that meets A.S.T.M. international specification D5798, described as a fuel blend for use in ground vehicles with automotive spark-ignition engines, or a successor A.S.T.M. international specification, as established by rules adopted by the department.

c. If the motor fuel is advertised for sale or sold as biobutanol blended gasoline, the motor fuel must comply with departmental standards which shall meet all of the following requirements:

(1) Biobutanol must be an agriculturally derived isobutyl or n-butyl alcohol that meets A.S.T.M. international specification D7862 for butanol for blending with gasoline for use as automotive spark-ignition engine fuel, or a successor A.S.T.M. international specification, as established by rules adopted by the department.

(2) Gasoline blended with biobutanol must meet requirements established by rules adopted in part or in whole based on A.S.T.M. international specification D4814.

4. a. For motor fuel advertised for sale or sold as diesel fuel by a dealer, the motor fuel

must meet requirements for that type of motor fuel and its additives established by the United States environmental protection agency including as provided under 42 U.S.C. §7545.

b. If the motor fuel is advertised for sale or sold as biodiesel or biodiesel blended fuel, the motor fuel must comply with departmental standards which shall comply with specifications adopted by A.S.T.M. international for biodiesel or biodiesel blended fuel, to every extent applicable as determined by rules adopted by the department.

(1) Biodiesel must conform to A.S.T.M. international specification D6751 or a successor A.S.T.M. international specification as established by rules adopted by the department. The specification shall apply to biodiesel before it leaves its place of manufacture.

(2) At least one percent of biodiesel blended fuel by volume must be biodiesel.

(3) The biodiesel may be blended with diesel fuel whose sulfur, aromatic, lubricity, and cetane levels do not comply with A.S.T.M. international specification D975 grades 1-D or 2-D, low sulfur 1-D or 2-D, or ultra-low sulfur grades 1-D or 2-D, provided that the finished biodiesel blended fuel meets A.S.T.M. international specification D975 or a successor A.S.T.M. international specification as established by rules adopted by the department.

(4) Biodiesel blended fuel classified as B-6 or higher but not higher than B-20 must conform to A.S.T.M. international specification D7467 or a successor A.S.T.M. international specification as established by rules adopted by the department.

5. a. Ethanol blended gasoline shall be designated E-xx where “xx” is the volume percent of ethanol in the ethanol blended gasoline.

b. Biobutanol blended gasoline shall be designated Bu-xx where “xx” is the volume percent of biobutanol in the biobutanol blended gasoline.

c. Biodiesel fuel shall be designated B-xx where “xx” is the volume percent of biodiesel.

6. Motor fuel shall not contain more than trace amounts of MTBE, as provided in [section 214A.18](#).

[C31, 35, §5093-d2; C39, **§5095.02**; C46, 50, 54, 58, 62, 66, 71, §323.2; C73, 75, 77, 79, 81, §214A.2; [82 Acts, ch 1131, §1, ch 1170, §1](#)]

[84 Acts, ch 1083, §1](#); [85 Acts, ch 76, §2 – 5](#); [85 Acts, ch 195, §23](#); [89 Acts, ch 75, §2](#); [90 Acts, ch 1252, §14](#); [91 Acts, ch 87, §1](#); [2000 Acts, ch 1224, §28](#); [2003 Acts, ch 167, §1, 4](#); [2004 Acts, ch 1086, §106](#); [2006 Acts, ch 1142, §6 – 8, 83](#); [2006 Acts, ch 1175, §8, 23](#); [2008 Acts, ch 1169, §17, 18, 30](#); [2009 Acts, ch 41, §263](#); [2009 Acts, ch 179, §118](#); [2010 Acts, ch 1031, §247](#); [2011 Acts, ch 113, §1](#); [2013 Acts, ch 15, §4 – 6](#); [2014 Acts, ch 1104, §9 – 11](#); [2015 Acts, ch 103, §21](#)

Referred to in [§159A.12](#), [§214A.1](#), [§214A.2B](#), [§214A.3](#), [§214A.4](#), [§214A.5](#), [§214A.7](#), [§214A.8](#), [§214A.16](#), [§214A.20](#), [§216B.3](#), [§260C.19A](#), [§262.25A](#), [§307.21](#), [§323.1](#), [§422.110](#), [§422.11P](#), [§422.11Y](#), [§423.4](#), [§452A.12](#), [§455G.31](#), [§904.312A](#)